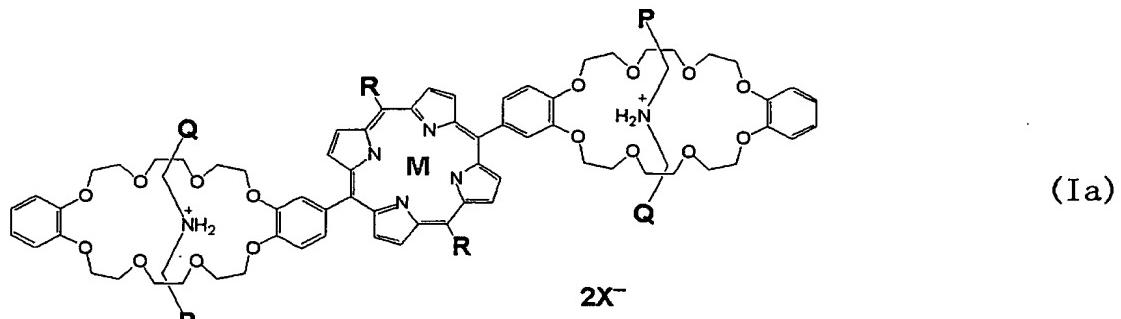


CLAIMS

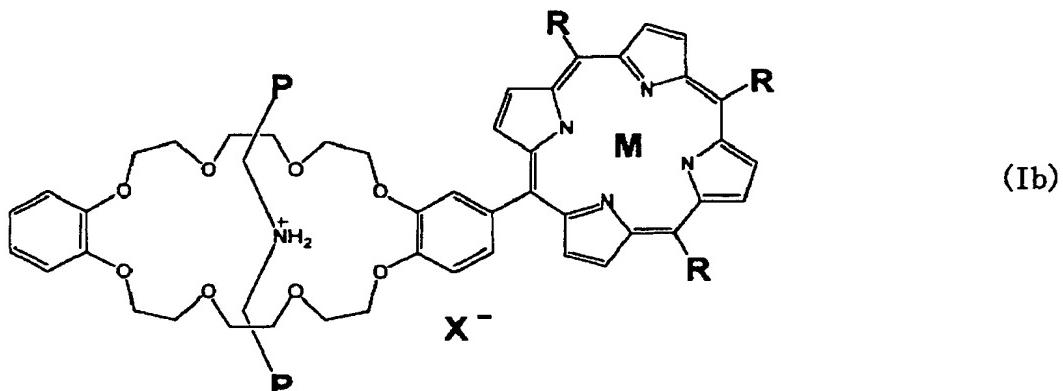
1. A monomer represented by the following general formula (Ia):



5

wherein M represents a transition metal coordinatable with the four nitrogen atoms and two additional ligands, P represents a group having, at a terminus thereof through a hydrocarbyl group, a nitrogen atom coordinatable with a metal, said hydrocarbyl group being selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, Q represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, R represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups and X represents an arbitrary anion atom.

2. A monomer represented by the following general formula (Ib):

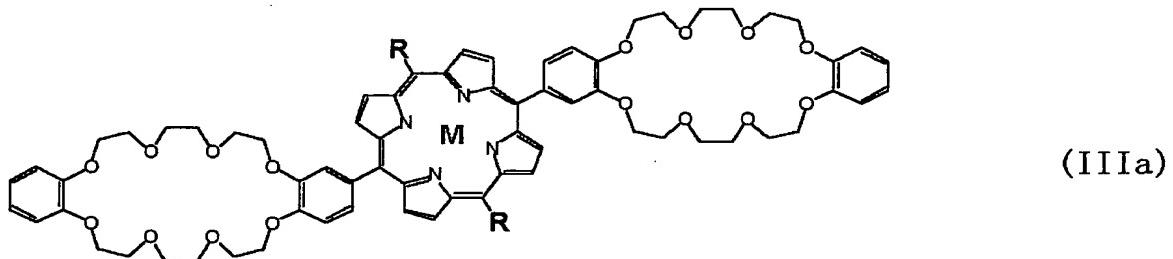


20

wherein M represents a transition metal coordinatable with the four nitrogen atoms and two additional ligands, P represents a group having, at a terminus thereof through a hydrocarbyl group, a nitrogen atom coordinatable with a metal, said hydrocarbyl group being selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, R represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups and X represents an arbitrary anion atom.

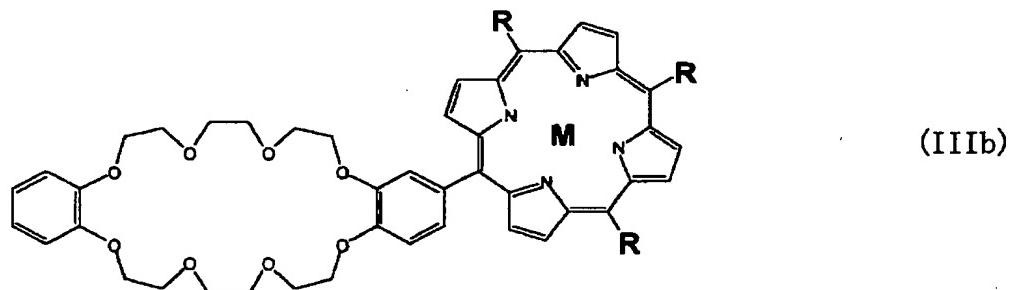
10

3. A compound represented by the following general formula (IIIa):



wherein M represents a transition metal coordinatable with the four nitrogen atoms and two additional ligands and R represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups.

4. A compound represented by the following general formula (IIIb):



wherein M represents a transition metal coordinatable with the four nitrogen atoms and two additional ligands and R

represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups.

5. A secondary ammonium salt represented by the
5 following general formula (IVa):

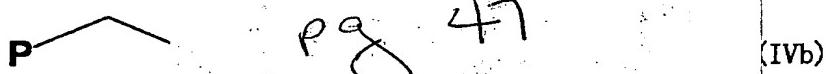


wherein P represents a group having, at a terminus thereof through a hydrocarbyl group, a nitrogen atom coordinatable with a metal, said hydrocarbyl group being selected from 10 aliphatic hydrocarbon groups and aromatic hydrocarbon groups, Q represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups and X represents an arbitrary anion atom.

- 15 6. A secondary following general

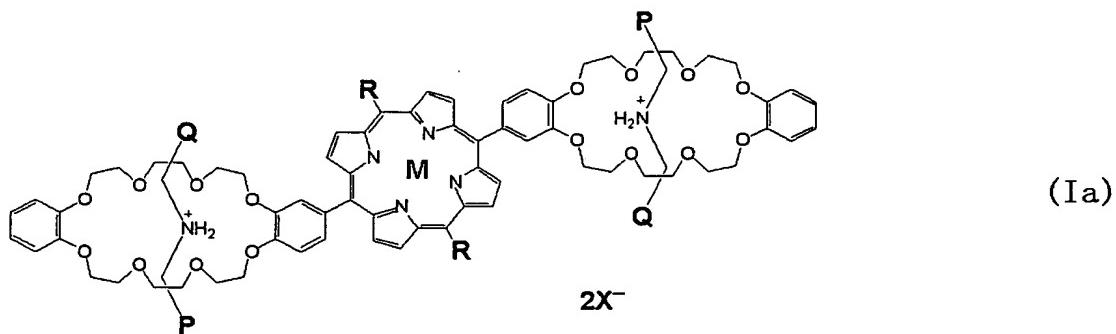
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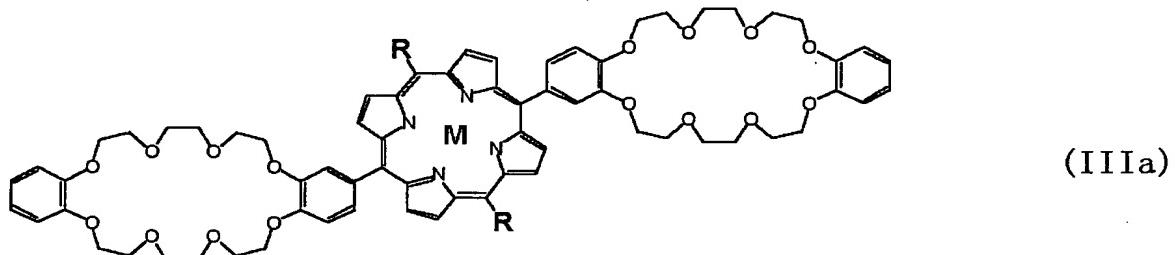


wherein P represents a group having, at a terminus thereof through a hydrocarbyl group, a nitrogen atom coordinatable 20 with a metal, said hydrocarbyl group being selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, and X represents an arbitrary anion atom.

7. A process for the preparation of a monomer
25 represented by the following general formula (Ia):



wherein M represents a transition metal coordinatable with the four nitrogen atoms and two additional ligands, P represents a group having, at a terminus thereof through a hydrocarbyl group, a nitrogen atom coordinatable with a metal, said hydrocarbyl group being selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, Q represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, R represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups and X represents an arbitrary anion atom, said process comprising reacting a compound represented by the following general formula (IIIa):



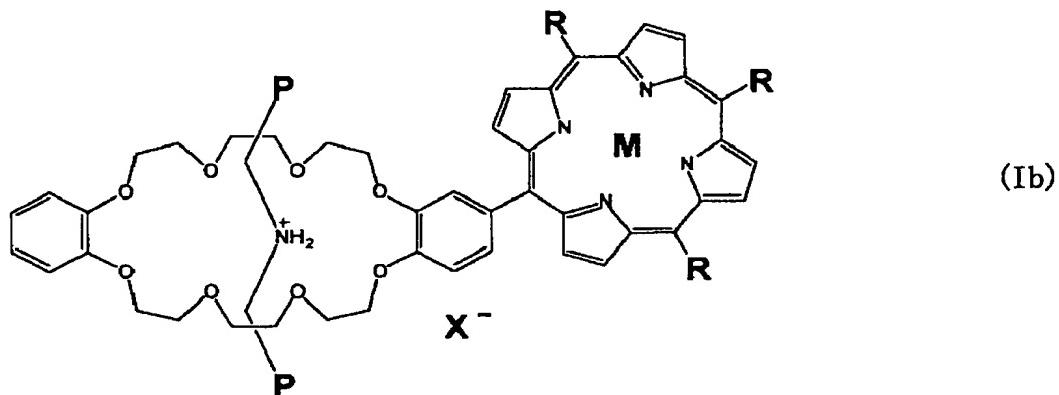
wherein M represents a transition metal coordinatable with the four nitrogen atoms and two additional ligands and R represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, with a secondary ammonium salt represented by the following general formula (IVa):



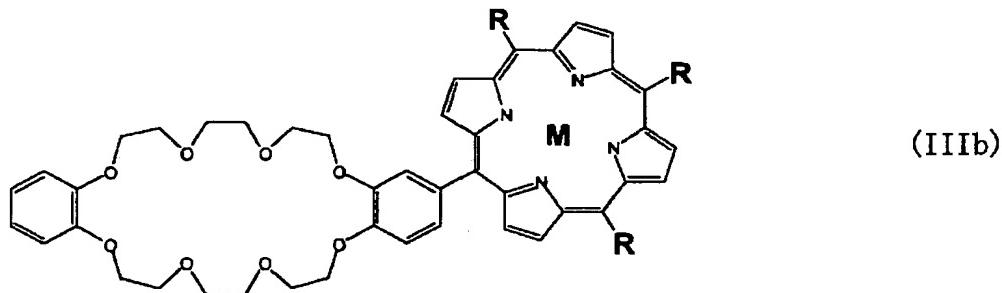
wherein P represents a group having, at a terminus thereof through a hydrocarbyl group, a nitrogen atom coordinatable with a metal, said hydrocarbyl group being selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, Q represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups and X represents an arbitrary anion atom, in a solvent.

10

8. A process for the preparation of a monomer represented by the following general formula (Ib):



wherein M represents a transition metal coordinatable with
15 the four nitrogen atoms and two additional ligands, P
represents a group having, at a terminus thereof through a
hydrocarbyl group, a nitrogen atom coordinatable with a
metal, said hydrocarbyl group being selected from aliphatic
hydrocarbon groups and aromatic hydrocarbon groups, R
20 represents a hydrocarbyl group selected from aliphatic
hydrocarbon groups and aromatic hydrocarbon groups and X
represents an arbitrary anion atom, said process comprising
reacting a compound represented by the following general
formula (IIIB):



wherein M represents a transition metal coordinatable with the four nitrogen atoms and two additional ligands and R represents a hydrocarbyl group selected from aliphatic

- 5 hydrocarbon groups and aromatic hydrocarbon groups, with a secondary ammonium salt represented by the following general formula (IVb):

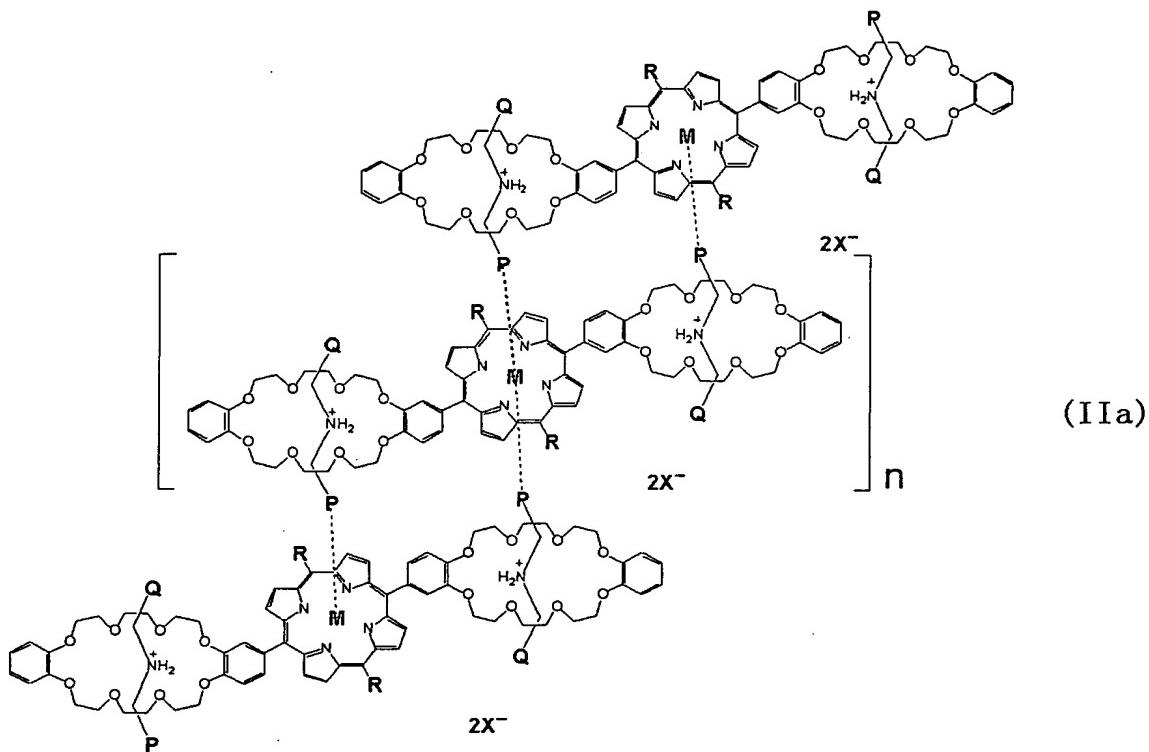


wherein P represents a group having, at a terminus thereof

- 10 through a hydrocarbyl group, a nitrogen atom coordinatable with a metal, said hydrocarbyl group being selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, and X represents an arbitrary anion atom, in a solvent.

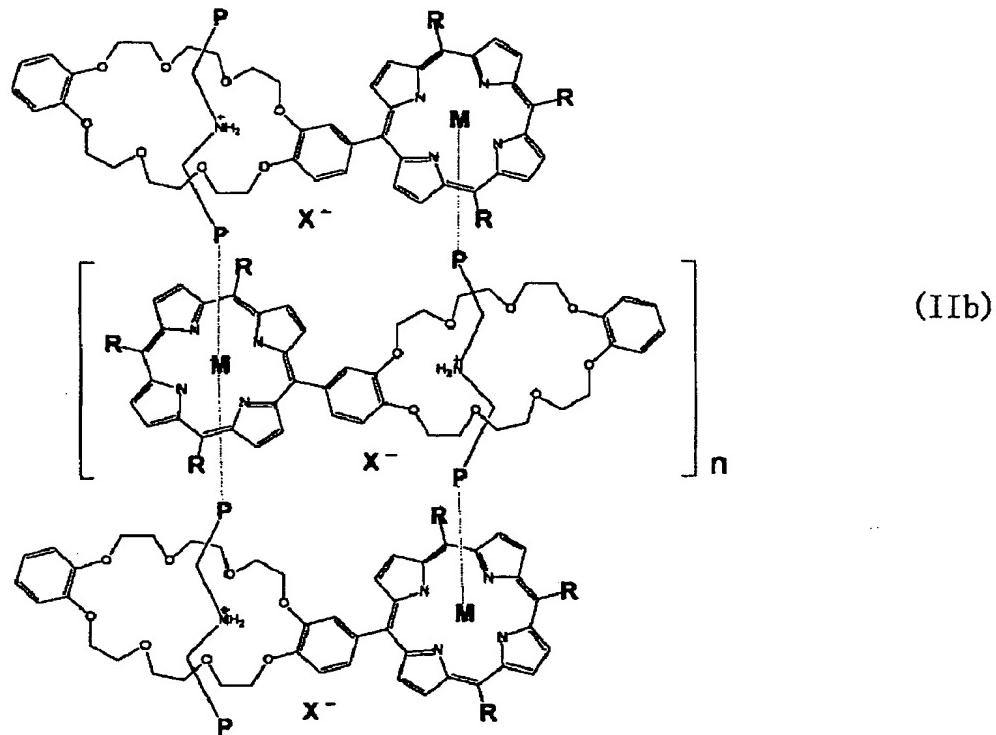
15

9. A polymer represented by the following general formula (IIa):



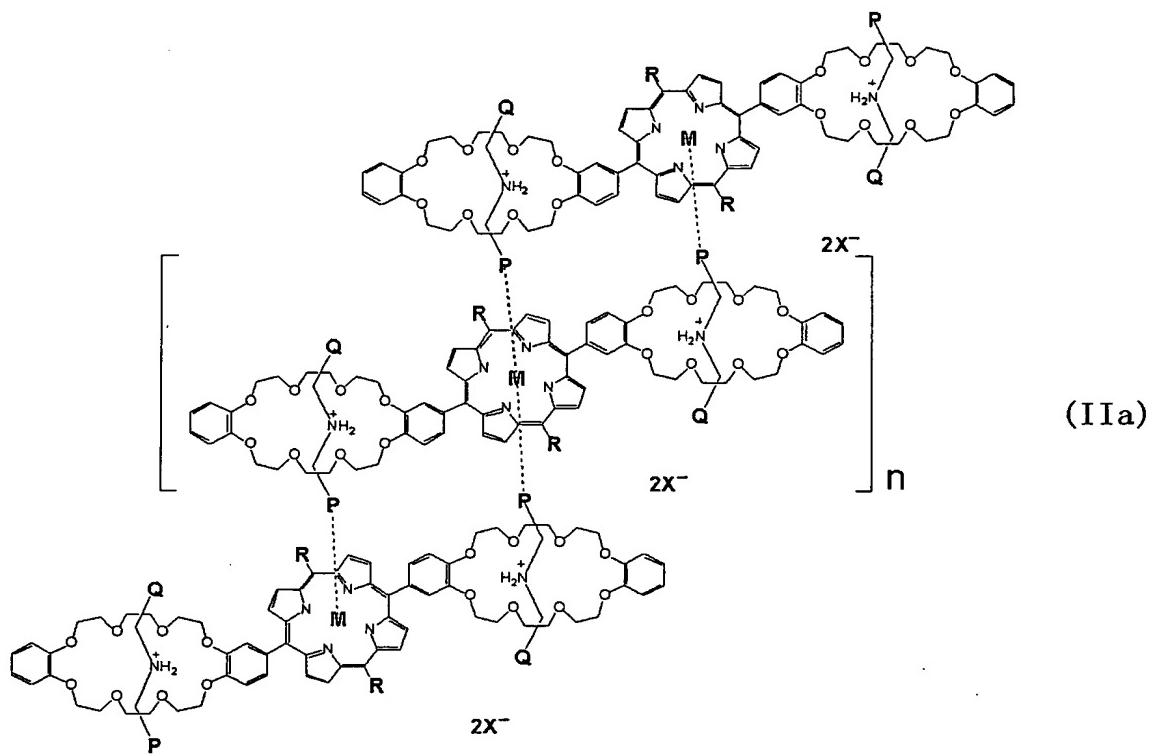
wherein M represents a transition metal coordinatable with the four nitrogen atoms and two additional ligands, P represents a group having, at a terminus thereof through a hydrocarbyl group, a nitrogen atom coordinatable with a metal, said hydrocarbyl group being selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, Q represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, R represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, X represents an arbitrary anion atom and n is an integer of 1 or more.

15 10. A polymer represented by the following general formula (IIIb):



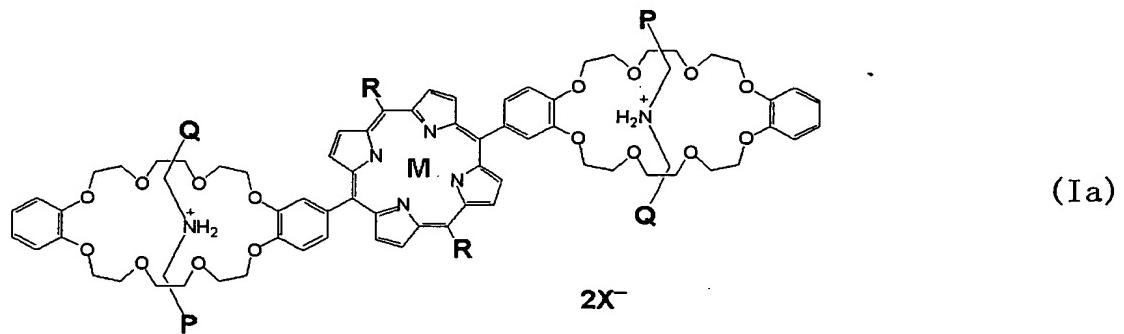
- wherein M represents a transition metal coordinatable with the four nitrogen atoms and two additional ligands, P represents a group having, at a terminus thereof through a
- 5 hydrocarbyl group, a nitrogen atom coordinatable with a metal, said hydrocarbyl group being selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, R represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, X
- 10 represents an arbitrary anion atom and n is an integer of 1 or more.

11. A process for the preparation of a polymer represented by the following general formula (IIa):



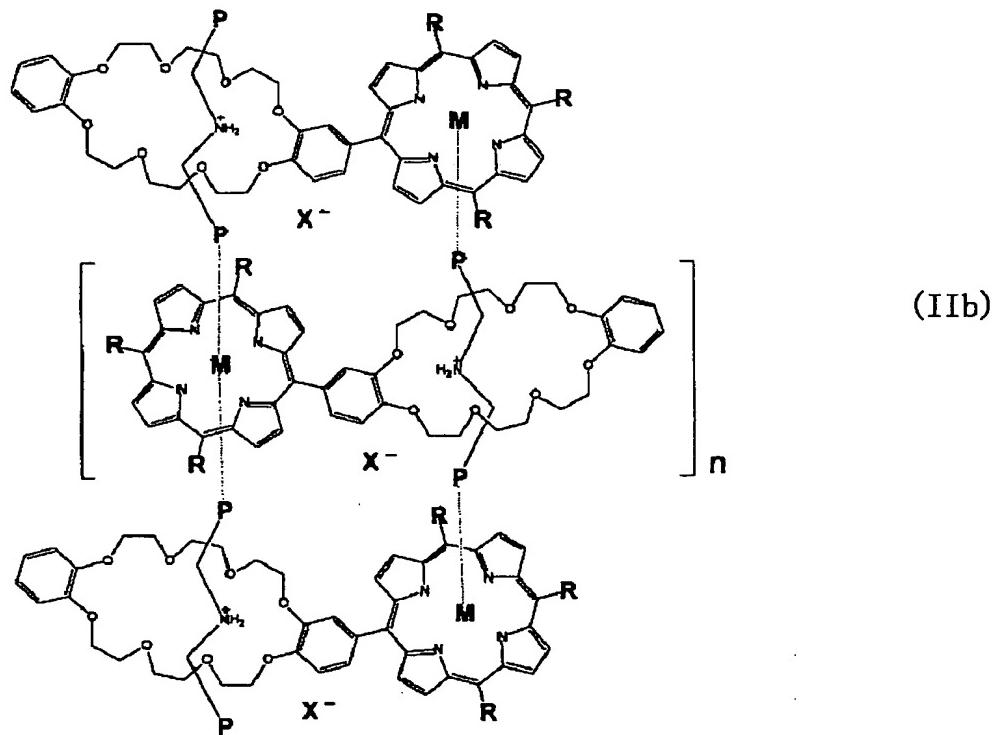
wherein M represents a transition metal coordinatable with the four nitrogen atoms and two additional ligands, P represents a group having, at a terminus thereof through a hydrocarbyl group, a nitrogen atom coordinatable with a metal, said hydrocarbyl group being selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, Q represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, R represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, X represents an arbitrary anion atom and n is an integer of 1 or more,

said process comprising polymerizing a monomer represented by the following general formula (Ia):



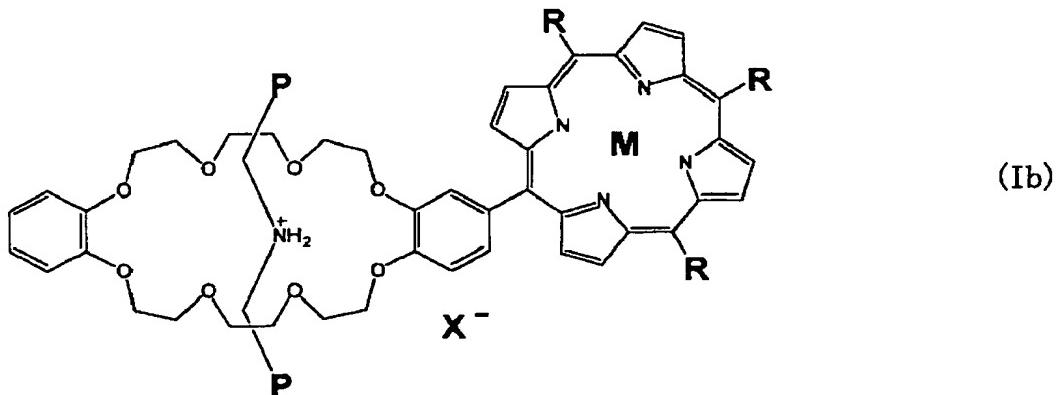
wherein M represents a transition metal coordinatable with the four nitrogen atoms and two additional ligands, P represents a group having, at a terminus thereof through a hydrocarbyl group, a nitrogen atom coordinatable with a metal, said hydrocarbyl group being selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, Q represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, R represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups and X represents an arbitrary anion atom.

12. A process for the preparation of a polymer represented by the following general formula (IIb):



wherein M represents a transition metal coordinatable with the four nitrogen atoms and two additional ligands, P represents a group having, at a terminus thereof through a hydrocarbyl group, a nitrogen atom coordinatable with a metal, said hydrocarbyl group being selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, R represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, X represents an arbitrary anion atom and n is an integer of 1 or more,

said process comprising polymerizing a monomer represented by the following general formula (Ib):



wherein M represents a transition metal coordinatable with the four nitrogen atoms and two additional ligands, P represents a group having, at a terminus thereof through a

5 hydrocarbyl group, a nitrogen atom coordinatable with a metal, said hydrocarbyl group being selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups, R represents a hydrocarbyl group selected from aliphatic hydrocarbon groups and aromatic hydrocarbon groups and X

10 represents an arbitrary anion atom.